

WHAT IS CLAIMED IS:

1. A vehicular lamp used in a vehicle, comprising:
a light source operable to emit light in accordance with power given thereto;
a lamp body operable to accommodate said light source and protect said light source from water;
a first resistor provided in an outside of said lamp body and connected in series with said light source; and
a current limiting circuit, provided in an inside of said lamp body, operable to prevent an excess current supplied to said light source in a case where dump surge occurs in a supplied voltage or current to be supplied to said light source.
2. A vehicular lamp as claimed in claim 1, wherein said current limiting circuit reduces a current flowing through said first resistor in a case where a voltage supplied to said first resistor is equal to or higher than a predetermined voltage.
3. A vehicular lamp as claimed in claim 2, further comprising a transmission line operable to apply a voltage generated by an external power supply to said current limiting circuit,
wherein said current limiting circuit supplies a current received from said transmission line to said first light source via said first resistor in a case where a voltage received from said transmission line is lower than the predetermined voltage, and bypasses at least part of the current received from said transmission line to ground in a case where the voltage received from said transmission line is higher than the predetermined voltage.

4. A vehicular lamp as claimed in claim 3, wherein said vehicular lamp is a lamp serving as a taillight of said vehicle and a stop lamp that emits light brighter than said taillight by an external switch,

said vehicular lamp further includes a second resistor provided in the inside of said lamp body, said second resistor being connected in parallel to said first resistor and in series with said light source and having a larger resistance value than said first resistor,

said first resistor receives power from said external power supply via said switch in a case where said vehicular lamp serves as said stop lamp, and

said second resistor receives the power from said external power supply via said switch in a case where said vehicular lamp serves as said taillight.

5. A vehicular lamp as claimed in claim 1, wherein said vehicular lamp is a lamp serving as a taillight of said vehicle and a stop lamp that emits light brighter than said taillight, and

said current limiting circuit includes:
a switching transistor, connected in series with said light source, operable to repeatedly switch whether or not a current is supplied to said light source; and
a duty controller operable to keep said switching transistor in ON-state in a case where said vehicular lamp serves as said stop lamp and to control a duration ratio of an ON-state and an OFF-state of said switching transistor to control power to be supplied to said light source in a case where said vehicular lamp serves as said taillight.

6. A vehicular lamp as claimed in claim 1, wherein said current limiting circuit is provided between said first resistor and said light source, detects a resistor current flowing through said first resistor and bypasses a part of said resistor current to ground in a case where said detected resistor current is larger than a predetermined current.

7. A vehicular lamp as claimed in claim 6, wherein said current limiting circuit includes:

- a limiting transistor, provided between said first resistor and said light source, operable to limit a current supplied from said first resistor to said light source, and

- a controlling transistor operable to bypass a part of said resistor current to said ground and make said limiting transistor limit the current supplied to said light source, in a case where the resistor current is larger than the predetermined current.

8. A vehicular lamp as claimed in claim 7, wherein said vehicular lamp is a lamp serving as a taillight of said vehicle and a stop lamp that emits light brighter than said taillight, and said vehicular lamp further includes:

- a chopper controller operable to turn said light source on and off to reduce brightness of said light source;

- a first transmission line operable to supply a power-supply voltage generated by an external power supply to said first resistor in a case where said vehicular lamp serves as said stop lamp; and

- a second transmission line operable to supply the power-supply voltage to said chopper controller to make said light source emit light with reduced brightness in a case where said vehicular lamp serves as said taillight.

9. A vehicular lamp as claimed in claim 8, wherein said chopper controller includes:

a switching transistor operable to repeatedly switch whether or not a current generated by said external power supply is supplied to said light source; and

a duty controller operable to control a duration ratio of an ON-state and an OFF-state of said switching transistor, and

said duty controller turns said switching transistor off in a case where said first transmission line supplies the power-supply voltage to said first resistor.